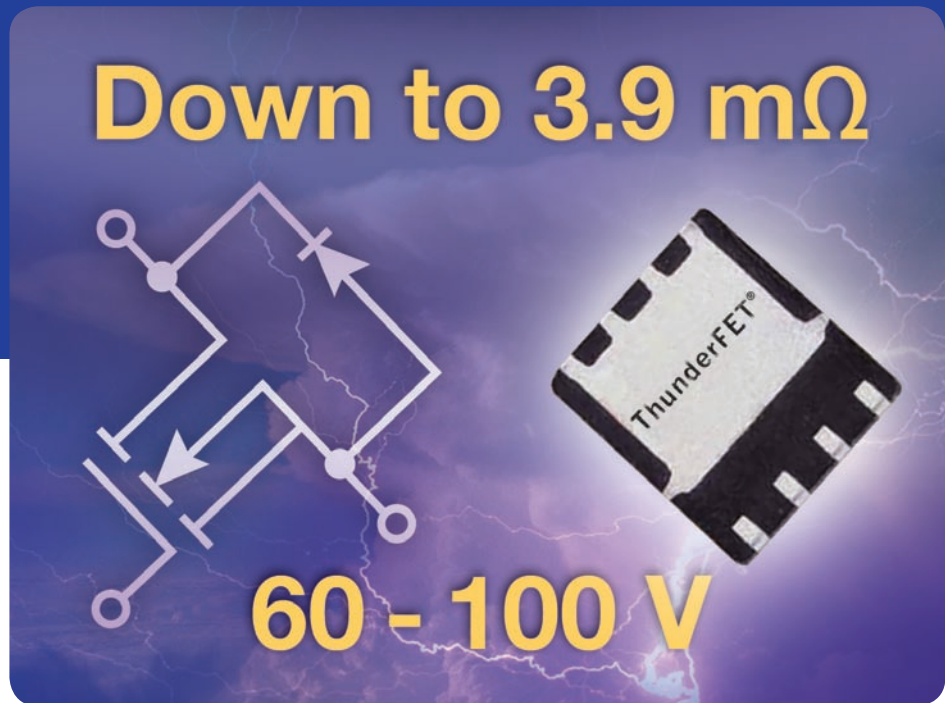




## POWER MOSFETs

ThunderFET®



### High Performance 60 V to 100 V Power MOSFETs

#### KEY BENEFITS

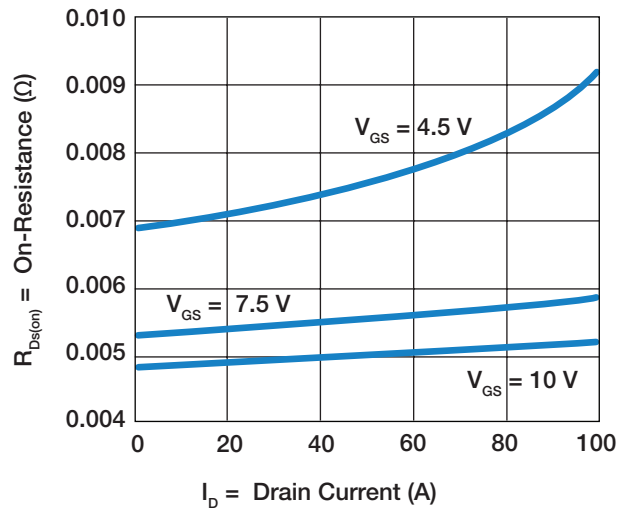
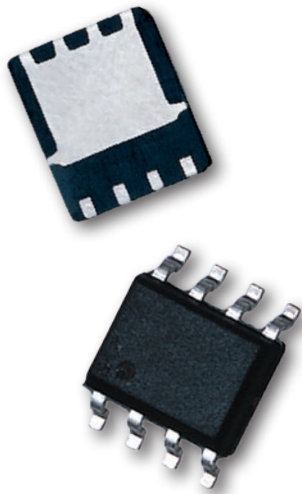
- New ThunderFET technology provides very low on-resistance and ultra-low Figure of Merit (FOM) for 60 V to 100 V power MOSFETs
- On-resistance ratings down to  $V_{GS} = 4.5$  V, include industry lowest FOM for 4.5 V rated devices
  - Can lower losses by enabling lower gate drive
  - Allows lower voltage, lower cost 5 V PWM ICs
  - Low FOM helps reduce switching losses
- Thermally advanced PowerPAK® packaging:
  - PowerPAK SO-8 for higher current
  - PowerPAK 1212-8, 1/3 the size of an SO-8 footprint, for space savings

#### APPLICATIONS

- Industrial
- Primary side switching in isolated DC/DC converters
- Secondary synchronous rectification



ThunderFET®



On-Resistance vs. Drain Current and Gate Voltage

PART NUMBER	$V_{DS}$ (V)	$V_{GS}$ (V)	$R_{DS(ON)}$ ( $\Omega$ )			$Q_g$ (nC)		$Q_{gd}$ (nC)	FOM		SAMPLES
			$V_{GS} = 10V$	$V_{GS} = 7.5V$	$V_{GS} = 4.5V$	$V_{GS} = 10V$	$V_{GS} = 4.5V$		$V_{GS} = 10V$	$V_{GS} = 4.5V$	
<b>Single N-Channel</b>											
<b>PowerPAK® SO-8</b>											
<b>SiR660DP*</b>	60	20	0.0039		0.0051	57			222		Q410
<b>SiR880DP</b>	80	20	0.0059	0.0067	0.0085	49	23	9.2	289	196	Available
<b>SiR870DP*</b>	100	20	0.0059	0.0064	0.0104	56	28		330	291	Available
<b>SiR804DP</b>	100	20	0.0072		0.0103	50.8	24.8	10.6	366	255	Available
<b>SiR882DP</b>	100	20	0.0087	0.0094	0.0115	38.5	18.3	7.8	335	210	Available
<b>SiR876DP</b>	100	20	0.0108	0.0114	0.0145	31.8	16.9	7.9	343	245	Available
<b>SiR878DP</b>	100	20	0.014	0.0148	0.019	28.3	13.6	6.4	396	258	Available
<b>Si7456CDP</b>	100	20	0.0235	0.0245	0.0315	15	7.7	3.7	353	243	Available
<b>Si7454CDP</b>	100	20	0.0305	0.033	0.043	12.8	6.3	2.9	390	271	Available
<b>SO-8</b>											
<b>Si4190DY</b>	100	20	0.0088		0.012	38.6	18.3	7.3	340	220	Available
<b>PowerPAK 1212-8</b>											
<b>SiS892DN</b>	100	20	0.029		0.042	14.2	6.7	3.6	412	281	Available

\* Target specification

For the latest list of devices, visit <http://www.vishay.com/mosfets/thunderfet>

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